

Appendix G

Marine and Terrestrial Species Accounts

Marine Species Accounts

Special Status Species

Special status species data were collected from a variety of sources, including the California Natural Diversity Database (CNDDDB), the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), and available literature describing the presence and distribution of State or Federal endangered species in or near the Project area. The following discussion focuses on those species that occur within the vicinity of the EOF, along the Ellwood and Gaviota Coasts. In addition, these species are generally representative of those found along shoreline habitats in Santa Barbara and Ventura counties, as well as those marine species located in the deeper waters of the Santa Barbara Channel. Table G-1 provides a list of listed marine species in the Ellwood area.

Table G-1. Listed Marine Species that May Occur in the Ellwood Area

Common Name	Scientific Name	Status	Habitat	Notes/Occurrence	Frequency
Invertebrates					
black abalone	<i>Haliotis cracherodii</i>	FE	Rocky intertidal and shallow subtidal with crevices and overhangs	Population has declined dramatically and is all but extinct on the California mainland coast south of Government Point. Historically was rare in the area of primary Project activities	Low
white abalone	<i>Haliotis sorenseni</i>	FE	Open, low relief rock or boulder habitat surrounded by sand at 80- to 200-foot water depths (Hobday and Tegner 2000)	Point Conception to Baja California; in water as shallow as 25 feet in the Channel (Aspen Environmental Group 2005)	Moderate
Fishes					

Table G-1. Listed Marine Species that May Occur in the Ellwood Area

Common Name	Scientific Name	Status	Habitat	Notes/Occurrence	Frequency
southern steelhead	<i>Oncorhynchus mykiss</i>	FE (south of Point Conception); CSC	Anadromous; returns to natal streams and rivers to spawn	Spawns in coastal streams in Santa Barbara County	High
Reptiles					
green sea turtle	<i>Chelonia mydas</i>	FT	Open ocean, coastal waters, and beaches	Nest primarily in Mexico and on the Galapagos Islands (Aspen 2005). Off the Pacific Coast, sightings have been recorded as far north as British Columbia, although most observations of this species are from northern Baja California and Southern California (Aspen 2005). Green sea turtles are seen from time to time off the Southern California coast, usually during the summer months.	Low
loggerhead sea turtle	<i>Caretta caretta</i>	FT	Open ocean, coastal waters, and beaches	Nests primarily near Japan and Australia (Aspen Environmental Group 2005); occasionally observed off Southern California usually during the summer months	Low
Pacific Ridley sea turtle	<i>Lepidochelys olivacea</i>	FT	Open ocean, coastal waters, and beaches tropical and warm temperate waters	Nesting beaches are along the coasts of Mexico and Costa Rica (Aspen Environmental Group 2005); infrequent visitors to waters north of Mexico, although stranded turtles have been found as far north as Washington	Low

Table G-1. Listed Marine Species that May Occur in the Ellwood Area

Common Name	Scientific Name	Status	Habitat	Notes/Occurrence	Frequency
leatherback sea turtle	<i>Dermochelys coriacea</i>	FE	Open ocean, coastal waters, and beaches	Most common sea turtle in U.S. waters north of Mexico; frequently off California during the summer and fall over the continental slope (Aspen Environmental Group 2005); eastern Pacific migratory corridor occurs along the west coast of the U.S. and Mexico	Low
Birds					
western snowy plover	<i>Charadrius nivosus nivosus</i>	FT	Occurs on sandy beaches, salt pond levees, and shores of large alkali lakes; utilizes sandy, gravelly, or friable soils for nesting	Breeds at Coal Oil Point Reserve; Devereaux Beach within the area of primary Project activities is listed as federally designated critical habitat	High
California least tern	<i>Sterna antillarum browni</i>	FE; SE (nesting colony)	Nearshore waters; breeding populations in California restricted to coastal locations; forages close to its breeding colonies in bays, harbors, and nearshore ocean waters	Least terns successfully produced chicks at Coal Oil Point in 2006 for the first time in 40 years but have not successfully produced chicks since then (Marschalek 2008).	High
Scripps's murrelet (formerly Xantus's murrelet)	<i>Synthliboramphus scrippsi</i>	ST	Forages in nearshore waters	Breeds on Santa Barbara, Anacapa, and San Clemente islands	Moderate
marbled murrelet	<i>Brachyramphus marmoratus</i>	FT; SE	Forages in nearshore waters	Late summer, fall, winter visitor to Southern California, including Channel Islands	Moderate
Scripps's murrelet (formerly Xantus's murrelet)	<i>Synthliboramphus scrippsi</i>	ST	Forages in nearshore waters	Breeds on Santa Barbara, Anacapa, and San Clemente islands	Moderate
Mammals					

Table G-1. Listed Marine Species that May Occur in the Ellwood Area

Common Name	Scientific Name	Status	Habitat	Notes/Occurrence	Frequency
Guadalupe fur seal	<i>Arctocephalus townsendi</i>	FT	Rocky shorelines and caves	Breeds primarily on Isla de Guadalupe off Baja California, Mexico coast (Carretta et al. 2015); second rookery was discovered at Isla Benito del Este, Baja California; individual animals appear regularly at the Channel Islands (Aspen Environmental Group 2005)	Low
Steller sea lion	<i>Eumetopias jubatus</i>	FT	Rocky and sandy beaches; temperate waters	Southernmost breeding ground is Año Nuevo Island in central California (Aspen Environmental Group 2005); uncommon in Southern California (Bonnell and Dailey 1993)	Low
southern sea otter	<i>Enhydra lutris nereis</i>	FT	Shallow nearshore waters with rocky or sandy bottoms that support large populations of their benthic invertebrate prey (Aspen Environmental Group 2005)	Population occurs primarily from north of Año Nuevo Island in to Point Conception (U.S. Geological Survey [USGS] 2014); small numbers observed regularly east of Point Conception	Moderate
blue whale	<i>Balaenoptera musculus</i>	FE	Cold and temperate waters offshore	Aggregate in Santa Barbara Channel along the shelf break at about the 650 feet isobath (Aspen Environmental Group 2005); most frequent west of San Miguel Island and along the north sides of San Miguel and Santa Rosa islands, and the western half of Santa Cruz Island; offshore Channel Islands (Larkman and Veit 1998)	Low

Table G-1. Listed Marine Species that May Occur in the Ellwood Area

Common Name	Scientific Name	Status	Habitat	Notes/Occurrence	Frequency
sei whale	<i>Balaenoptera borealis</i>	FE	Temperate and subtropical waters	Wintering grounds to feeding grounds that extend from west of the Channel Islands as far north as Alaska in summer (Aspen Environmental Group 2005); rare in California waters	Low
fin whale	<i>Balaenoptera physalus</i>	FE	Cold and temperate waters offshore	Summer distribution is generally offshore and south of the northern Channel Island chain, particularly over the Santa Rosa-San Nicolas Ridge	Low
humpback whale	<i>Megaptera novaeangliae</i>	FE	Migrates along submarine ridges and occasionally enters the coastal waters of the San Pedro and Santa Barbara channels (Lagomarsino and Price 2001)	Summer through fall along the shelf break off the Channel Islands (Aspen Environmental Group 2005)	Low
north Pacific right whale	<i>Eubalaena japonica</i>	FE	Temperate waters along the shelf and slope	Since 1955, only five sightings of right whales have been recorded in waters off Southern California (Aspen Environmental Group 2005)	Low
sperm whale	<i>Physeter macrocephalus</i>	FE	Offshore waters year-round in water depths greater than 3330 feet	Peak abundance from April to mid-June and again from late August through November as they pass by during migration (Aspen Environmental Group 2005)	Low

Notes: FE = Federal Endangered; FT = Federal Threatened; SE = State Endangered; ST = State Threatened; FP = CDFW Fully Protected; CSC = California Species of Special Concern

Source: U.S. Fish and Wildlife Service 2016

Black Abalone (*Haliotis cracherodii*) – Federally Listed Endangered: Black abalone are marine gastropods that occur in intertidal and shallow subtidal rocky habitat from northern California to Bahia Tortugas, Mexico. Black abalones inhabit rocky shores where bedrock provides deep, protective crevice structure (National Marine Fisheries Service [NMFS] 2011). Black abalone populations have declined dramatically since the 1970s from overfishing and a bacterial disease known as withering syndrome. Black abalones have



The Black Abalone is an endangered species wherever it is found, and encounters of this marine mollusk along the coast of California are rare.

gone locally extinct in most locations south of Point Conception. Black abalone probably occurred historically in the rocky intertidal habitat at Coal Oil Point and Goleta Point although it is not listed as occurring between Goleta and Naples in CDFW resource maps in 1980 and was considered uncommon between Government Point and Point Dune even prior to the decline (NMFS 2011). The area of primary Project activities is not listed as federally designated critical habitat for black abalone (NMFS 2011). The potential for black abalone to be present in the area of primary Project activities is low.

White Abalone (*Haliotis sorensen*) – Federally Listed Endangered: In May 2001, white abalone became the first marine invertebrate to be listed as a Federal endangered species. White abalone is a mollusk that occurs on rocky habitat from Point Conception to Baja California at 80- to 200-foot water depths (Hobday and Tegner 2000). White abalones have been recorded in water as shallow as 25 feet in the Santa Barbara Channel (Aspen Environmental Group 2005). White abalones are typically found in open low relief rock or boulder habitat surrounded by sand (Hobday and Tegner 2000). A greater than 99 percent decline has occurred in both the abundance and density of white abalone in California since the 1970s (Hobday and Tegner 2000). The abalone fishery contributed to the decline of white abalone by over harvesting and reduced the density to the point where recruitment success has been unlikely. White abalones have a moderate potential to occur in rocky habitat in the Ellwood Coast area.



Found in open low and high rocky habitat at depths between 80-100 ft, White abalone are the deepest occurring abalone species in California.



Steelhead habitat occurs throughout much of the coastal area of California, and include inland creeks and streams connected to the Pacific Ocean.

Southern Steelhead (*Oncorhynchus mykiss*) – Federally Listed Endangered: The Southern California steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss*) are listed as endangered by the USFWS, and include all natural populations below natural and manmade impassable barriers in streams from the Santa Maria River in San Luis Obispo County to the U.S.-Mexico Border (NOAA 2006). In 2005 the Federal Government published a final rule listing most streams and estuarine areas (below impassable manmade barriers) along the south coast of California as critical habitat for the Southern California Steelhead DPS (NOAA 2005).

Steelhead are the migratory, ocean-going form of rainbow trout. They spawn in freshwater coastal streams, but spend their adult lives in the ocean where they may migrate extensively. Adult steelhead enter creeks in the winter, usually after the first substantial rainfall and move upstream to suitable spawning areas. Spawning usually takes place from March to early May, generally in riffle areas or the tails of pools that contain clean, coarse gravel (NOAA 2006). Juvenile steelhead will remain in freshwater for an average of two years before migrating to the ocean. Downstream movement of adults after spawning and juveniles migrating to the ocean usually occurs from March through July. Juvenile steelhead may spend several weeks in the coastal lagoon or estuary of a stream before entering the ocean. Optimal habitat for steelhead throughout its range on the Pacific Coast can generally be characterized by clear, cool water with abundant instream cover, well-vegetated stream banks, relatively stable water flow, and a 50:50 pool-to-riffle ratio. Based upon the availability of suitable habitat and absence of barriers to migration, Southern steelhead have the potential to occur in several drainages in the Project area and along the proposed onshore pipeline route, including Tecolote Canyon, Eagle Canyon, and Bell Canyon, and Devereux Slough

Green Sea Turtle (*Chelonia mydas*) – Federally Listed Threatened: Green sea turtles nest primarily in Mexico and on the Galapagos Islands (Aspen Environmental Group 2005). Off the Pacific Coast, sightings have been recorded as far north as British Columbia, although most observations of this species are from northern Baja California and Southern California (Aspen Environmental Group 2005). Green sea turtles



Green sea turtles are the largest of the hard-shelled sea turtles, and range global in tropical and subtropical waters.



Variations in currents following El Niño events may occasionally bring loggerhead sea turtles to southern California waters.

once were common in San Diego Bay, but now appear to be limited to a single channel in the southern part of the bay where they are year-round residents (Aspen Environmental Group 2005). Green sea turtles are seen from time to time off the Southern California coast, usually during the summer months.

Loggerhead Sea Turtle (*Caretta caretta*) – Federally Listed Threatened: Loggerhead sea turtles occur worldwide but nest primarily near Japan and Australia (Aspen Environmental Group 2005). Loggerhead sea turtles are occasionally observed off Southern California during the summer months. In 2005, NMFS issued a final rule to protect loggerhead sea turtles that follow warmer El Niño currents and risk becoming entangled in drift gillnet fishing operations.



While California populations of Ridley Sea Turtles are listed as threatened, coastal Mexico breeding populations are endangered and are regularly monitored by the Fish and Wildlife Service.

Pacific Ridley Sea Turtle (*Lepidochelys olivacea*) – Federally Listed Threatened: This species also sometimes is referred to as the olive Ridley sea turtle. Ridley sea turtles occur worldwide in tropical and warm temperate waters. In the eastern north Pacific, major nesting beaches for this species are along the coasts of Mexico and Costa Rica (Aspen Environmental Group 2005). These sea turtles are infrequent visitors to waters north of Mexico, although stranded Ridley sea turtles have been found as far north as Washington.



Pacific Leatherbacks migrate incredible distances between seasonal breeding and foraging areas, from as far as the Indo-Pacific to the coastal waters of the Americas.

Leatherback Sea Turtle (*Dermochelys coriacea*) – Federally Listed Endangered: Leatherback sea turtles in the eastern Pacific are probably part of the western Mexico, Central America, and northern Peru breeding population (Aspen Environmental Group 2005). Leatherbacks are the most common sea turtle in U.S. waters north of Mexico. Leatherback sea turtles are sighted relatively frequently off the



Snowy Plover habitat conservation areas exist in many places throughout the California coast in an effort to preserve and maintain critical nesting habitat.

coast of California, particularly during the summer and fall seasons. Most observations of leatherback sea turtles off California have been over the continental slope (Aspen Environmental Group 2005). They are found mainly along the continental slope over water approximately 655 to 4,920 feet deep. These turtles originate on Papua New Guinea and other islands in the western Pacific Ocean, but adults cross the ocean to reach rich feeding grounds off central and northern California. It has been suggested that an eastern Pacific migratory corridor for leatherback sea turtles occurs along the west coast of the U.S. and

Mexico. NMFS recently has designated Critical Habitat for leatherback sea turtles (NMFS 2012). The Ellwood Coast is not within federally designated critical habitat for the leatherback sea turtle, which occurs between Point Arena and Point Arguello.

Western Snowy Plover (*Charadrius nivosus nivosus*) – Federally Listed Threatened: Western snowy plover is found on sandy beaches, estuaries, salt pond levees, and shores of large alkali lakes. This species needs sandy, gravelly, or friable soils for nesting. Western snowy plovers nest within the vicinity of the area of primary Project activities at Coal Oil Point Reserve. Sands Beach at Coal Oil Point Reserve has a wintering population of about 250 plovers and a breeding population of about 20 pairs. In 2014, 33 snowy plovers laid 77 nests at Coal Oil Point Reserve and 21 (27 percent) of the nests hatched (Sandoval and Price 2015). Wintering snowy plovers use other beaches in the area, particularly Goleta Beach. Devereaux Beach from the western boundary of Isla Vista County Park to a point along the beach opposite the end of Santa Barbara Shores Drive has been listed as federally designated critical habitat for western snowy plover (USFWS 2012).

California Least Tern (*Sterna antillarum browni*) – Federally Listed Endangered; State Listed Endangered: The California least tern ranges from the San Francisco Bay area southward into South America. They are present in California during their breeding season of mid-April to mid-September. Least terns started nesting at the Coal Oil Point Reserve, just east of Ellwood Coast and in 2006 produced the first chicks there in 40 years. In 2007, four breeding



The California least tern breeds primarily in bays of the Pacific Ocean and have a limited range in Southern California.



Common breeding areas for the Scripps's Murrelet include the Channel Islands National Park off the coast of Santa Barbara and the Baja California Pacific coast.

pairs established four nests and failed to produce fledglings due to predation by red-tailed hawks and skunks (Marschalek 2008). No least tern nesting attempts were recorded at Coal Oil Point Reserve in 2009 following a couple years of unsuccessful nesting attempts due to predation (Marschalek 2010). Unsuccessful attempts by a single pair at Coal Oil Point Reserve occurred in 2011; no chicks have been fledged since 2006 (Marschalek 2012; Frost 2014).

Scripps's Murrelet (*Synthliboramphus scrippsii*) – State Listed Threatened: Scripps's

murrelets (formerly Xantus's murrelets) range from Baja California north to Oregon and Washington. As of August 2012, Xantus's Murrelet has been split into Scripps's Murrelet and Guadalupe Murrelet (NPS 2012). The difference between the two species is that Scripps's Murrelet breeds within the Channel Islands National Park, while the Guadalupe Murrelet visits after breeding season. Scripps's murrelets are common late-winter, spring and early-summer residents to the Channel Islands and nearshore islands and offshore mainland waters (Lehman 2015). They nest colonially in only 12 to 15 locations, including Santa Barbara, Anacapa, San Miguel, Santa Catalina, San Clemente, and Santa Cruz islands. Santa Barbara Island contains the largest breeding concentration of this species in the world (Burkett et al. 2003). An effort to remove black rats from Anacapa Island has reestablished nesting by Scripps's murrelets there. This species forages throughout the area of primary Project activities from these nest sites, particularly in the area between Santa Barbara and Santa Catalina islands and the mainland, but at-sea densities are low compared to other seabirds in the area (Mills et al. 2005).

Marbled Murrelet (*Brachyramphus marmoratus*) – Federally Listed Threatened; State Listed Endangered: Marbled murrelets are very

rare late summer, fall, and winter visitors to nearshore waters in Southern California, including several of the Channel Islands (Lehman 2015). They breed in old-growth coniferous forests along the north coast of California northward through coastal British Columbia and Alaska. The USFWS designated critical habitat for this species, and a recovery plan is in effect. The breeding range in California is north of Monterey County.

Like Scripps's murrelet, this species forages in nearshore waters around the Channel



Due to near-shore feeding habits, the Marbled Murrelet can be especially susceptible to coastal oil spills.



After a long history of exploitation for sea otter fur, the Southern Sea Otter population range is drastically reduced compared to the natural historic range.

Islands, as well as more widely in the area of primary Project activities; but the species is expected to occur here in very low numbers.

Guadalupe Fur Seal (*Arctocephalus townsendi*) – Federally Listed Threatened: Guadalupe fur seals breed primarily on Isla de Guadalupe off the coast of Baja California, Mexico (Carretta et al. 2015). In 1997, a second rookery was discovered at Isla Benito del Este, Baja California. Individual animals do not appear regularly at the Channel Islands; however, a single pup was born on San Miguel Island in 1997.

Steller Sea Lion (*Eumetopias jubatus*) – Federally Listed Threatened: Steller sea lions occur from the Bering Strait in Alaska to Southern California. Their southernmost breeding ground is Año Nuevo Island in Central California (Aspen Environmental Group 2005). Steller sea lions are uncommon in the Channel (Bonnell and Dailey 1993). A few adult or subadult males are sometimes seen during the summer around the west end of San Miguel Island, but no breeding has occurred in Southern California since 1980. Steller sea lions would be very unlikely to occur in the area of primary Project activities.

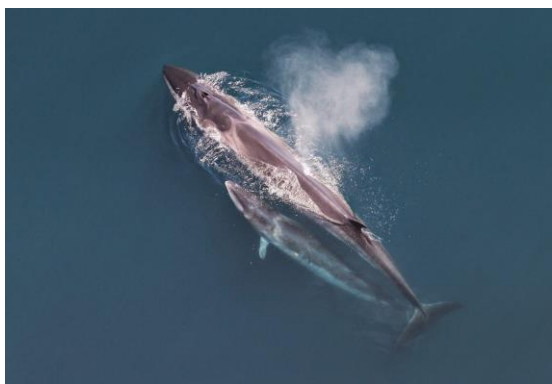


Though they have breed along the coasts of Southern California in the past, the Steller Sea Lion does not typically occur south of Monterey Bay.

Southern Sea Otter (*Enhydra lutris nereis*)

– Federally Listed Threatened: The southern sea otter ranges from north of Año Nuevo Island to Point Conception (USGS 2014). Although the sea otter population is concentrated in central California, otters are frequently sighted south of Point Conception. In January 1999, more than 150 otters were counted south of Point Conception (Aspen Environmental Group 2005). The southern expansion of the sea otter range is sporadic (Lafferty and Tinker 2014). A group of male otters that moved down to Coal Oil Point several years ago retreated. In the sea otter survey of spring 2014, 56 otters were counted southeast of Point Conception; and only one animal was seen southeast of Gaviota State Beach (Hatfield and Tinker 2014). This

otter was near Naples. Currently the southern limit of the sea otter population is considered to be approximately 3 miles west of Gaviota State Beach (Hatfield and Tinker 2014). Sea otters are relatively rare between Ellwood and Goleta, but they would be



Sei Whales are typically observed individually, or as part of a small group.

expected to occur occasionally in the area of primary Project activities. A sea otter was sighted off More Mesa (Howarth 2006); and, in September 2006, one was seen in Goleta Bay (N. Davis, personal observation 2006). Sea otters usually inhabit shallow nearshore waters with rocky or sandy bottoms that support large populations of their benthic invertebrate prey (Aspen Environmental Group 2005). In California, otters generally live in waters less than 60 feet deep and less than 1.2 miles offshore.

Blue Whale (*Balaenoptera musculus*) –

Federally Listed Endangered: In the eastern north Pacific, blue whales are found from the Gulf of Alaska south to at least Costa Rica (Aspen Environmental Group 2005). In Southern California, blue whales tend to aggregate in the Santa Barbara Channel along the shelf break at an approximately 650-foot water depth (Aspen Environmental Group 2005). Blue whale occurrence in Southern California is strongly seasonal. Blue whales tend to be present in California waters from June through October with peak numbers in August through October (Larkman and Veit 1998). They are almost never seen in winter. Blue whale sightings are most frequent west of San Miguel Island and along the north sides of San Miguel and Santa Rosa islands and the western half of Santa Cruz Island. All blue whales observed in the Channel during CalCOFI cruises between 1987 and 1995 were offshore of the Channel Islands (Larkman and Veit 1998). The largest aggregations were seen off San Miguel Island and southwest of the south end of San Clemente Island. The stock estimate was 1,647 whales in 2013 (Carretta et al. 2015).



Blue Whale sightings and whale watching activities are common within the Santa Barbara Channel.

Sei Whale (*Balaenoptera borealis*) –

Federally Listed Endangered: Sei whales migrate northward from wintering grounds in temperate and subtropical waters to feeding grounds that extend from west of the Channel Islands as far north as Alaska in the summer (Aspen Environmental Group

2005). Sei whales are rare in California waters. The population off California is believed to be very low (i.e., tens to several hundred).

Fin Whale (*Balenoptera physalus*) – Federally Listed Endangered: Fin whales occur year-round off central and Southern California, with peak numbers in summer and fall (Aspen Environmental Group 2005). In the Channel, summer distribution is generally offshore and south of the northern Channel Island chain, particularly over the Santa Rosa-San Nicolas



Fin whales, or often called the razorback, are regularly observed off the coast of the Southern California Bight.



Humpback whales are notorious for their breaching behavior, making them a popular, but rare sight for whale watchers.

Ridge. Estimates place the fin whale population between California and Washington at about 3,051 animals (Carretta et al. 2015). Fin whales may occasionally occur within the area of primary Project activities, but they would be expected to be rare.

Humpback Whale (*Megaptera novaeangliae*) – Federally Listed Endangered: Humpback whales occur in California in summer through fall seasons. In the Channel, humpback whales tend to concentrate along the shelf break off the Channel Islands (Aspen Environmental Group

2005). Humpbacks often migrate along submarine ridges and occasionally enter the coastal waters of the San Pedro and Santa Barbara channels (Lagomarsino and Price 2001). The humpback whale population in California, Oregon and Washington was estimated to be 1,918 whales in 2013 (Carretta et al. 2015).

North Pacific Right Whale (*Eubalaena japonica*) – Federally Listed Endangered: Since 1955, only five sightings of right whales have been recorded in waters off Southern California (Aspen Environmental Group 2005).



Due to the severe populations declines in historic years, sighting of the North Pacific Right Whale in the eastern North Pacific Ocean are very rare.

All of these sightings were recorded between February and May.

Sperm Whale (*Physeter macrocephalus*) – Federally Listed Endangered: Sperm whales are the largest of the toothed whales. Off the coast of California, sperm whales are present in offshore waters year-round, with peak abundance from April to mid-June and again from late August through November as they pass by during migration (Aspen Environmental Group 2005). Sperm whales are a pelagic species and usually are found in water depths greater than 3,300 feet. A 2013 abundance estimate for the sperm whale population along the west coast of the United States between Washington and California was 971 whales (Carretta et al. 2015).



Historically hunted and harvested for oil, bans on whaling have allowed for the recovery of Sperm Whale populations all over the world, however, threats from humans still remain.

In addition to the aforementioned federally and State listed threatened and endangered marine species, several species of special concern to the State are known to frequent the Channel, including the area of primary Project activities. These include, but are not limited to, great egret (*Ardea alba*), great blue heron (*Ardea herodias*), and long-billed curlew (*Numenius americanus*).

Terrestrial Species Accounts

Special Status Species

Special status species data were collected from a variety of sources, including the CNDDDB, the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (2015), and available literature describing the presence and distribution of State or Federal endangered species in or near the Project area. The following discussion focuses on those species that occur within the vicinity of the EOF, along the Ellwood and Gaviota Coasts as terrestrial species further removed from primary project activity have more limited potential for impact. In addition, these species are generally representative of those found along shoreline habitats in Santa Barbara and Ventura counties.

Special Status Plant Species

No Federal- or State-listed rare, threatened, or endangered plant species are expected to occur within the immediate Project area. However, several rare, threatened, or endangered plant species are reported or have been observed in the regional area and are listed in Table G-2. The species with highest potential to occur within the Project areas are discussed in further detail below.

Table G-2. Known Sensitive Plants or those with Potential to Occur in the Vicinity of the EOF and Line 96 Pipeline

Species	Status ¹	Notes/Occurrence
Plants		
<i>Atriplex coulteri</i> Coulter's saltbush	List 1B	Spreading perennial, occurs on coastal bluffs. Reported to occur on ocean bluffs near UCSB.
<i>Atriplex serenana</i> ssp. <i>davidsonii</i> Davidson's saltbush	List 1B	Annual herb, occurs in coastal bluff scrub. May be extirpated from Santa Barbara County, historical occurrence at UCSB.
<i>Calystegia sepium</i> ssp. <i>binghamiae</i> Santa Barbara morning-glory	List 1A	Perennial herb, occurs in marshes and swamps. Presumed extinct, noted to have historically occurred in the Project area in a local lagoon.
<i>Centromadia parryi</i> ssp. <i>australis</i> Southern tarplant	List 1B	Annual herb, occurs in moist places such as margins of marshes and mesic grassland.
<i>Horkelia cuneata</i> ssp. <i>puberula</i> Mesa Horkelia	List 1B	Perennial herb, may occur in sandy/gravelly coastal shrub habitat; listed in the Dos Pueblos Canyon U.S. Geological Survey (USGS) grid (CNPS 2015); not known to occur at the Project area.
<i>Lasthenia conjugens</i> Contra Costa goldfields	List 1B	Annual herb, occurs in Isla Vista open space and vernal pool reserves; not known to occur in Project area.

<i>Lasthenia glabrata</i> Lindl. ssp. <i>coulteri</i> Coulter's goldfields	List 1B	Annual herb, occurs in marshes, swamps and vernal pool reserves; not known to occur in Project area.
<i>Lonicera subspicata</i> ssp. <i>subspicata</i> Santa Barbara honeysuckle	List 1B	Shrub, occurs in chaparral and coastal scrub. Known to occur at scattered locations in the Project area.
<i>Monardella hypoleuca</i> White-veined monardella	List 1B	Perennial herb, Known only from the Santa Monica, Santa Ynez, and Sierra Madre Mountains; not known to occur in the Project area.
<i>Scrophularia atrata</i> Black-flowered figwort	List 1B	Perennial herb, occurs in chaparral, coastal scrub, coastal dunes and riparian scrub. Reported from dunes near Devereux Slough and Coal Oil Point.
<i>Suaeda esteroa</i> Estuary seablite	List 1B	Perennial herb, occurs in coastal salt marshes. Historically reported from Goleta Slough near the beach.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> salt marsh bird's-beak	E	Perennial herb occurs in salt marsh habitats; known to occur in the Carpinteria salt marsh reserve
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> Ventura marsh milk-vetch	E	Perennial herb occurs in coastal meadow and dune habitats near salt marshes; know to occur in Ventura county at Ormond Beach and Mandalay Bay properties.

Source: CNPS 2015.

¹ Federal code:

E = Listed as endangered under the Federal Endangered Species Act

California Native Plant Society status codes:

List 1A Presumed extinct in California

List 1B Rare, threatened, or endangered in California and elsewhere

Santa Barbara Honeysuckle - Santa Barbara Honeysuckle (*Lonicera subspicata* var. *subspicata*) is a CNPS List 1B species. It is a perennial evergreen shrub that blooms from May to February and occurs in chaparral, cismontane woodland, and coastal scrub between 10 and 1,000 meters above mean sea level (CNPS 2015). Historically, the species was known to occur in extensively throughout coastal scrub in the Project area. Most recently it was documented within the Arroyo Hondo Preserve, upstream of the Gaviota Coast line within the Project area. Based upon the presence of suitable scrub habitat and documented occurrences of the species in the Project area, there is potential for the species to be present in the Project area.



Santa Barbara Honeysuckle is known to occur within the chaparral regions of Goleta, Santa Barbara, and throughout Central and Southern California chaparral communities.



Black-flowered figwort occurs almost exclusively around the Point Conception and Santa Barbara coastal regions.

Black-flowered figwort - Black-flowered figwort (*Scrophularia atrata*) is a CNPS list 1B species. It is a perennial herbaceous plant that blooms from March through July and occurs in Coastal Strand, Chaparral, Coastal Sage Scrub, and Closed-cone Pine Forest vegetation communities. The species is known to occur in the Project area in the dunes near Devereux Slough and Coal Oil Point. Due to recent documented observations of the species north of the Project area near the Santa Inez River mouth, and the prevalence of historic occurrences of the species near Ellwood and in the Devereux Slough dunes, there is potential

for the species to be present in salt marsh habitat within the Project area.

Salt marsh bird's-beak - Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*) is Federally- and state-listed as endangered. It is an annual herbaceous plant that blooms from May to October and occurs in Coastal Strand, Coastal Salt Marsh, and wetland-riparian plant communities. The species has been documented extensively from the Carpinteria Salt Marsh Reserve in the Project area. Due to recent observations of the species in the Project area and the prevalence of salt marsh habitat, the species is assumed to be present in salt marsh habitat within the Project area.



Native to the Southern California coast, Salt marsh bird's beak grows in high salt concentration coastal wetlands.



A member of the pea family, this herbaceous perennial occurs near salt marshes and wetlands and a large population exists within Ventura County.

Ventura marsh milk-vetch - Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) is a CNPS List 1B species. It is a perennial herbaceous plant that blooms from June through October and occurs in Coastal Salt Marsh and wetland-riparian plant communities. The species inhabits disturbed areas, with substrates that are as fine as sand and as coarse as gravel. The species has been documented in the Project area in Ventura County, at the mouth of the Santa Clara River. Due to the extent of coastal salt marsh in the Project area, its tolerance for disturbed habitat, and the

diminutive stature of the species, there is potential for the species to be present in coastal salt marsh habitat throughout the Project area.

Special Status Wildlife

A list of sensitive wildlife species that have potential to occur within the Project area are presented in Table G-3. The species with highest potential to occur within the immediate Project areas are discussed in further detail below.

Avian Special Status Species

A number of avian special status species inhabit the Project area, including the Western snowy plover, Belding's savannah sparrow, and the white-tailed kite (City of Goleta 2006). These individual species, as well as other potentially occurring special status species, are further discussed below.

Table G-3. Known Sensitive Wildlife Species or those with Potential to Occur in the Vicinity of the EOF and Line 96 Pipeline

Common Name Scientific Name	Status ¹ Fed/State	Notes/Potential to Occur
Invertebrates		
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	E/-	No Potential to Occur: One individual of this species was collected from a vernal pool in Isla Vista in the early 1990s but species has not been observed since despite sampling. This observation has been questioned because species is unlikely to occur so far north of known geographic range. No vernal pool habitat exists in Project area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/-	No Potential to Occur: Species found in man-made depressions along the north side of Union Pacific Railroad tracks, about 5 miles west of Ellwood Mesa. Not found to date in Isla Vista vernal pools.

Common Name Scientific Name	Status ¹ Fed/State	Notes/Potential to Occur
Globose dune beetle <i>Coelus globosus</i>	SC/-	Potential to Occur: This species is known to occur within the foredune habitat in the Coal Oil Point Reserve (COPR) and in foredunes between the mouths of Tecolote and Bell Canyon, just west of the EOF.
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	SC/-	Potential to Occur: This beetle has been found along the sandy beach in front of the mouth of Devereux Slough and near the mouth of Dos Pueblos Creek about 2 miles west of the EOF. The larvae burrow along wet margin of estuaries and adults feed on flies near the slough mouth.
Monarch butterfly <i>Danaus plexippus</i>	-/CSC	Potential to Occur: Overwintering aggregations occur in eucalyptus woodlands at several locations in the project area. The Ellwood Mesa supports one of the largest overwintering populations of this species and several other aggregations are located along the coast of the pipeline route.
Mimic tryonia (= California brackish water snail) <i>Tryonia imitator</i>	-/-	Potential to Occur: Inhabitants coastal lagoons, estuaries and salt marshes; reported to occur at the lagoon at UCSB.
Fish		
Tidewater goby <i>Eucylogobius newberryi</i>	E/CSC	Potential to Occur: This species has been reported from several creeks in the project vicinity including Bell Canyon, Tecolote Canyon, and Eagle Canyon. Formerly occurred in Devereux Slough and suitable habitat still exists there; could re-colonize naturally from existing populations nearby.
Southern California steelhead <i>Oncorhynchus mykiss</i>	E/CSC	Potential to Occur: This species is listed as endangered south of Point Conception, and is known to occur in coastal streams in the area, many of which (including Tocalote Canyon) are designated as critical habitat.
Amphibians		
California red-legged frog <i>Rana aurora draytonii</i>	T/CSC	Potential to Occur: This species has been reported from the Project vicinity. Breeding populations occur in Tecolote Canyon, Eagle Canyon, Arroyo Quemada Creek and Bell Canyon, on the Sandpiper Golf Course, and west of the EOF, as well as multiple other creeks in the greater Project area.
Reptiles		
Southwestern pond turtle <i>Actinemys marmorata</i>	-/CSC	Potential to Occur: Historically known from Devereux Slough and tributaries of Devereux Creek north of Highway 101. Observed in Dos Pueblos Creek and tributary, with potential to occur in other Gaviota area streams or in riparian habitats throughout the Project area.
California horned lizard <i>Phrynosoma coronatum frontale</i>	-/CSC	No Potential to Occur: Undocumented sightings from sand dunes around Campus Point and COPR. Low potential for occurrence in dunes west of mouth of Devereux Slough. Could occur in scrub habitat throughout the Project area.

California legless lizard <i>Anniella pulchra pulchra</i>	-/CSC	No Potential to Occur: Suitable habitat exists in dunes west of the mouth of Devereux Slough in the Project regional area.
Two-striped garter snake <i>Thamnophis hammondi</i>	-/CSC	Potential to Occur: Observed in several small streams and wetlands in the western Goleta area (UCSB and Santa Barbara Museum of Natural History -SBMNH museum records). Suitable habitat may exist in permanently wet reaches of Devereux Creek and other riparian corridors along pipeline route.
Birds		
California brown pelican <i>Pelecanus occidentalis californicus</i>	E/E	Potential to Occur: Common mid-summer to spring immediately off-shore and occasionally on beach in the Project vicinity. Breeds on Channel Islands.
Light-footed rail <i>Rallus obsoletus levipes</i>	E/E,FP	Potential to Occur: Suitable habitat is present in the salt marsh vegetation around Devereux Slough.
California least tern (nesting) <i>Sterna antillarum browni</i>	E/E,FP	Potential to Occur: Former breeder, now mid-summer and fall visitor at mouth of Devereux Slough and occasionally in interior slough mud flats. Unlikely to nest at these locations.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T/CSC	Potential to Occur: The sandy beach habitat in the project area provides suitable foraging habitat for this species. The beach around mouth of Devereux Slough and Coal Oil Point supports a successful breeding colony of this species. A total of 3.1 miles of Devereux beach and Coal Oil Point have been designated as critical habitat by the USFWS in 2005.
Cooper's hawk <i>Accipiter cooperi</i>	-/CSC	Potential to Occur: Relatively common resident in woodlands along South Coast of Santa Barbara county. A few pairs breed locally, including area within Devereux Slough. Likely to forage in grasslands and woodlands, including eucalyptus stands, in the Project area.
Ferruginous hawk <i>Buteo regalis</i>	-/CSC	Potential to Occur: Observed foraging in winter in near the pipeline route in the vicinity of the intersection of Calle Real and Farren Road, about ½ mile west of the EOF. Unlikely breeder in the area.
Northern harrier <i>Circus cyaneus</i>	-/CSC	Potential to Occur: Regular fall, winter, and spring transient to grasslands and open scrub habitats along South Coast of Santa Barbara county. Likely to forage in grasslands in the Project area. Unlikely breeder in the area.
White-tailed kite <i>Elanus leucurus</i>	SC/FP	Potential to Occur: Commonly forages in grasslands in the project area. Known to nest in eucalyptus woodland in the Ellwood mesa and near the EOF. Reported to occur on the south side of Highway 101 between Eagle Canyon and Dos Pueblos Canyon.
Burrowing owl <i>Athene cunicularia</i>	SC/PT	No Potential to Occur: Formerly a common wintering and breeding species along the coast, now a rare fall and early winter visitor. Observed wintering in open grasslands on University lands in 2001. Suitable foraging and roosting habitat exists in open grasslands in the Project area.

Loggerhead shrike <i>Lanius ludovicianus</i>	SC/CSC	Potential to Occur: Regularly observed resident of the Project area; known to nest in area.
California thrasher <i>Toxostoma redivivum</i>	SC/-	Potential to Occur: Observed in dune scrub and coastal sage scrub southwest and west of Devereux Slough. Suitable scrub habitats are relatively small and highly fragmented, yet still suitable for nesting.
Coast horned lark <i>Eremophila alpestris actia</i>	-/CSC	Potential to Occur: Occurs commonly in grasslands throughout project area in late fall through late winter. Pairs were observed on Santa Barbara Ranch during nesting season
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	-/E	Potential to Occur: Known to breed in Devereux Slough salt marsh habitats. Habitat requirements are restrictive and species is unlikely to occur away from suitable habitat.
Tricolored blackbird <i>Agelaius tricolor</i>	SC/CSC	No Potential to Occur: Uncommon and local breeder in Santa Barbara county. Unlikely to nest but possibly could forage in small patches of freshwater marsh habitat present in Devereux Creek and Open Space Area and in mixed flocks with other Brewer's blackbird and red-winged blackbird in grasslands near such habitats.
Mammals		
Pallid bat <i>Antrozous pallidus</i>	-/CSC	Potential to Occur: Grasslands and open scrub habitats in the project area provide excellent foraging habitat and possibly roosting habitat for this species. There are suitable offsite roosts that are within flight distance of the project area. Moderate to high potential for occurrence in the Project area.
Yuma myotis <i>Myotis yumanensis</i>	SC/CSC	Potential to Occur: May forage along creeks and other wetland habitats in the Project area.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SC/CSC	No Potential to Occur: Widespread in Santa Barbara county, including along the coast, but roosts have only been found at Vandenberg AFB and in the Santa Ynez Valley within or adjacent to riparian habitats. May use the Project area as foraging habitat from off-site roosts located along the south slope of the Santa Ynez Mountains. Low potential for occurring in the Project area.
American Badger <i>Taxidea taxus</i>	-/CSC	No Potential to Occur: Diggings and foraging sign observed in grasslands in the Open Space Area and on University lands to the east. Current status in Project area unknown, but probably low potential for occurring because of proximity to developed areas and increased isolation.

Source: CNDDB 2016; City of Goleta 2004; City of Goleta, City of Santa Barbara & UCSB 2004.

¹Definitions:

Federal

- E = Listed as endangered under the Federal Endangered Species Act
- T = Listed or proposed for Federal listing as threatened under the Federal Endangered Species Act
- SC = Species which information indicates may warrant listing but for which substantial biological information to support a proposed rule is lacking

State

- E = Listed as endangered under the California Endangered Species Act

CSC	=	Species of special concern in California
PT	=	Proposed for listing as threatened in California under the California Endangered Species Act
FP	=	Fully Protected under the California Endangered Species Act
*	=	Locally protected species

Western snowy plover - The western snowy plover, (*Charadrius alexandrinus nivosus*) was listed by the USFWS as threatened on March 5, 1993. Critical habitat was designated for this species in 1999 and a draft recovery plan for the western snowy plover is available. A revised critical habitat map and description has been proposed for the species which includes a series of beaches along the Pacific coastline from Washington to Southern California, and includes beach habitat along the western side of Coal Oil Point (USFWS 2012).



The Western snowy plover has designated critical habitat along 3.1 miles of the Devereux coastline to help support breeding and wintering for these birds

The Western snowy plover breeds on the Pacific coast. The current known breeding range of this population extends from Damn Point, Washington, to Habia Magdalena, Baja California, Mexico (USFWS 2014). The Western snowy plover is known to also breed in interior areas of Oregon, California, Nevada, Utah, New Mexico, Colorado, Kansas, Oklahoma, and north-central Texas, as well as coastal areas of Texas and possibly northeastern Mexico (USFWS 2001). The Pacific coast population of the Western snowy plovers (defined as those individuals that nest adjacent to or near tidal waters, and includes all nesting colonies on the mainland coast, peninsulas, offshore islands, adjacent bays, and estuaries) is genetically isolated from western snowy plovers breeding in the interior. The Pacific coast population of the Western snowy plover consists of both resident and migratory birds; some birds winter in the same areas used for breeding. Migratory individuals of the coastal species travel either north or south within their coastal range.

Approximately 3.1 miles of Devereux Beach along Coal Oil Point is included as a critical habitat unit for the species. Beginning at the western limit of Isla Vista County Park, the critical habitat unit follows the beach around Coal Oil Point to the beach adjacent to the end of Santa Barbara Shores Drive and covers a total of 36 acres (CSLC 2009). Within the Coal Oil Point Reserve, the mouth of the Devereux Slough is overwintering and breeding habitat for the Western snowy plover (City of Goleta 2004, Coal Oil Point Reserve 2015). Despite the reduction of wintering plovers, the wintering plover population reached a maximum of almost 400 individuals in 2004, though steadily declined and leveled off to approximately 150 snowy plovers in 2014. The number of breeding pairs remains relatively constant from 30 pairs in 2004 to 33 pairs in 2014 (Coal Oil Point Reserve 2015). Management efforts to protect these plovers include the installation of

signage and fences delineating protected areas to limit impacts from beach use on this sensitive species.

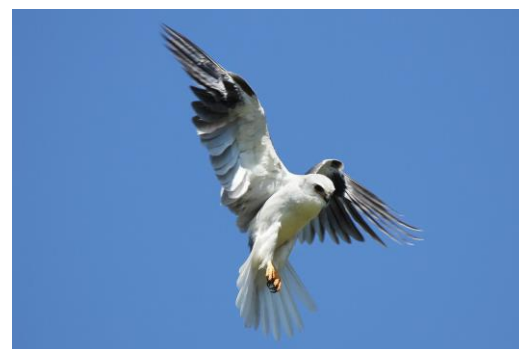
Belding's Savannah sparrow - Belding's savannah sparrows (*Passerculus sandwichensis beldingi*) are non-migratory, year-round residents of coastal salt marshes from Santa Barbara County south into Baja California, Mexico. Their wintering habitat may also include upland habitats. As with other coastal marsh species, development along Southern California's coastline has eliminated much of the sparrow's habitat. Many of the high tidal marsh areas used by this species for nesting have been diked or filled for houses, roads, and other uses. In response to a decline in populations and habitat fragmentation, the Belding's Savannah sparrow was listed as endangered under the California Environmental Species Act (CESA) on January 10, 1974; in 1986, a survey of 27 California marsh areas found approximately 2,274 pairs of Belding's savannah sparrows (CDFW 1987).



The loss of coastal wetland regions along the west coast of the United States has caused large declines in the population of Belding's Savannah sparrow.

Belding's Savannah sparrows feed on sand flies and insects found on mudflats, beaches and coastal vegetation. The breeding season ranges from February through September, with nesting usually occurring from mid-March through early July. Pairs may have multiple clutches in a breeding season. They nest in pickleweed, just above the high tide line, and have also been observed to nest in salt grass. A concealed cup nest is constructed, usually with its rim flush to the ground. Belding's Savannah sparrows have historically been observed on the Ellwood Mesa and within the Goleta Slough (CSLC 2009). Territorial pairs and adults with fledglings have been observed in salt marsh vegetation around Devereux Slough since the spring of 1990 (City of Goleta, City of Santa Barbara and UCSB 2004). Due to the species' habitat requirements detailed above and the described habitat of Bell Canyon, there is also potential for Belding's savannah sparrows to occur in the Bell Canyon creek habitat or other smaller estuaries in the Project area.

Nesting Raptors - Due to the presence of grassland habitats along the bluffs throughout the Project area at Ellwood Mesa, along the Gaviota



The Project area provides important nesting habitat for a number of raptors, including the white-tailed kite (pictured above).

Coast and at other open coastal sites, numerous raptor species have been observed or are expected to occur in the Project area. Cooper's hawk (*Accipiter cooperi*), ferruginous hawk, loggerhead shrike, long-eared owl, and northern harrier, all of which are California watch-listed species and white-tailed kite (*Elanus leucurus*) (a California fully protected species) have been documented in the Project area (City of Goleta 2004, CNDDDB 2016). Other raptors observed in the Project vicinity include sharp-shinned hawk, burrowing owls, and American prairie falcon.

Turkey vulture (*Cathartes aura*) roosting sites, which are listed as a "significant habitat resource" in the County of Santa Barbara (2009) Comprehensive Plan), and nesting sites of other raptors have also been observed in the area. Nests and breeding sites of these species (and others) are protected under the Migratory Bird Treaty Act. Lands near to the Project area include large eucalyptus trees which may be used by these species for reproduction. As such, trees would be protected from disruption if breeding or nesting activities occurred in them during the breeding season.

Light-footed Rail - A total of 525 breeding pairs of this Federal- and State-endangered light-footed rail (*Rallus obsoletus levipes*) [formerly the light-footed clapper rail, *Rallus longirostris levipes*] were documented in California in 2013. The decline of the light-footed



Though no documented sightings have occurred within the Project area, light-footed rails are historically known to occur in the region, where several habitable areas exist.

rail is believed to be directly related to the degradation and destruction of coastal salt marsh habitat. The light-footed rail was last documented in Devereux Slough during the 1940s and in the Goleta Slough marshes in the 1960s. The species has not been seen in the general Santa Barbara County area since 2004 (Lehman 2015, USFWS 2009). Although 23 pairs were documented as breeding in Mugu Lagoon in 2013, at the far southeastern end of the Project area, the species is considered a rare migrant and unlikely to occur in the Project area due to lack of suitable habitat and extreme rarity

California Least Tern - The California least tern (*Sterna antillarum browni*), which was federally listed as endangered in 1970 and State-listed as endangered in 1971, is addressed above, in *Marine Species Accounts*.

Invertebrate Special Status Species

Two local beetle species are included on the CDFW Special Animals list, but are not formally protected. They inhabit foredune habitat, and are therefore unlikely to reside in the immediate Project area (due to the armoring present at the base of the bluff); however, suitable habitat for these species are present in the Project area.

Globose Dune Beetle - The globose dune beetle (*Coelus globosus*) is one of four species of dune beetles restricted to coastal sand dunes and beaches along the Pacific Coast. This species, similar to the other three, is strongly fossorial (burrowing). It is restricted to foredunes immediately adjacent to the ocean and can tolerate frequent inundation from ocean tides. Globose dune beetles occur in foredunes around the mouths of Bell Canyon and Tecolote Canyon (City of Goleta 2004); it also has potential to occur within the Devereux



Primarily a coastal bird, the California least tern has a very limited range across the California and Baja coast.



The globose dune beetle, a primarily subterranean beetle species, prefers to tunnel through coastal sand and dune vegetation.



Occurring within sandy beach and coastal areas, the Project area and adjacent coastal zones provide many habitable areas for the sandy beach tiger beetle.

Dunes, at Haskell's Beach and along other wider beach and dune habitats in Santa Barbara and Ventura counties.

Sandy Beach Tiger Beetle - The sandy beach tiger beetle (*Cicindela hirticollis gravida*) occupies sandy beaches and coastal scrub habitats near estuaries in central and Southern California. The adult beetles are carnivorous and feed on flies and other insects common to the tidal zone. The sandy beach tiger beetle has been observed around the mouth of Devereux Slough on the Coal Oil Point Reserve and at

Goleta Beach. Suitable habitat also occurs in dunes at the base of the bluffs along the Ellwood Mesa (City of Goleta 2004); it also has potential to occur at Haskell's Beach and along other wider beach and dune habitats in Santa Barbara and Ventura counties.

Monarch Butterfly - The monarch butterfly (*Danaus plexippus*) is a common winter migrant in Santa Barbara County known to occur within the Project area. Monarchs are included in the CDFW's Special Animals List, and overwintering sites are protected under the

Santa Barbara County Local Coastal Program and City of Goleta General Plan/Coastal Land Use Plan as environmentally sensitive habitat. Butterfly aggregation sites within the City of Goleta's portion of Open Space Plan Area are referred to as the Ellwood Complex (City of Goleta 2006). The Ellwood Complex consists of six localized sites. All of these sites consist of large clusters or windrows of eucalyptus trees. Roosting monarch butterflies have not been observed at the Project site.



The monarch butterfly is known to migrate extreme distances, preferring to roost in clustered eucalyptus groves, such as the nearby Goleta Butterfly Grove.

Estuarine and Riparian Special Status Species

Four special status species have been documented to reside in riparian and estuarine areas in the Project area and are discussed below. These species occur or have the potential to occur in a number of the streams and estuaries along the shorelines of Santa Barbara and Ventura counties, including locations such as Bell Canyon adjacent to the EOF as well as drainages such as Eagle Canyon and Dos Pueblos Creek further west.

Southwestern Pond Turtle - The southwestern pond turtle (*Actinemys marmorata*) is a California

Species of Special Concern and is currently listed as a candidate for Federal protection. Historically, the southwestern pond turtle had a relatively continuous range along the Pacific slope drainages from southern Washington to Baja California. Habitat requirements for this species include still or slow-moving water and the availability of aerial and aquatic basking sites. The southwestern pond turtle is known to occur in multiple habitats in the Project area, including Devereux Slough, Goleta Slough, and the Campus Lagoon at UCSB, as well as potentially in Ellwood Canyon, Bell Canyon, and Tecolote Canyon, and upstream Atascadero Creek (City of Goleta 2004 and 2010).



Though the range for the Southwestern Pond Turtle has decreased, this species is regularly known to occur throughout multiple watersheds of the southeastern Los Padres National Forest.

Tidewater Goby - The tidewater goby (*Eucylogobius newberryi*) was federally listed as endangered in 1994 by the USFWS. It is a small estuarine fish reaching only 2 inches in length. Preferred habitat for this species includes lagoons, marshes, and tributaries with tidal influence between Del Norte County and San Diego County, California. The tidewater goby resides in coastal streams within 2 miles of the ocean and slow, shallow, brackish water. They usually inhabit water with salinities less than 10 parts per thousand (ppt); however, they can tolerate salinities up to 60 ppt (City of Goleta 2004). This species feeds on small aquatic invertebrates and insect larvae. The majority of tidewater gobies live only one year, making this species highly sensitive to adverse environmental conditions during the breeding season. The tidewater goby is known to occur in Devereux Slough and Goleta Slough (USFWS 2007); this species may also occur within other estuaries in the Project area.



The tidewater goby is native to the coastal lagoons, streams, and marshes along the coast of California and is the only known member of its genus.



Sensitive to many human activities, many restoration and monitoring programs have been created to ensure the safety of this sensitive species.

California Red-Legged Frog - The California red-legged frog (*Rana aurora draytonii*) is listed as threatened by the USFWS, and is considered a state Species of Special Concern. It inhabits freshwater marshes and streams with thick growths of emergent vegetation in association with “plunge pools” of moderately deep water. The California red-legged frog is distributed throughout 26 counties in California. California red-legged frogs breed between November and April in standing or slow-moving water at least 2½ feet deep with emergent vegetation, such as cattails (*Typha* spp.), bulrushes (*Schoenoplectus* spp.) or overhanging willows (*Salix* spp.) (Hayes and Jennings 1988). Egg

masses containing 2,000 to 5,000 eggs are attached to vegetation below the surface and hatch after 6 to 14 days (Jennings and Hayes 1994). According to the City of Goleta General Plan Conservation Element, California red-legged frogs have been recorded in Bell Canyon and Tecolote Canyon (City of Goleta 2006); it is also known to occur within a number of streams along the Gaviota Coast such as Eagle Canyon and Arroyo Quemada Creek.

Southern California Steelhead - The Southern California steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss*) are listed as endangered by the USFWS, and include all natural populations below natural and manmade impassable barriers in streams from the Santa Maria River in San Luis Obispo County to the U.S.-Mexico Border (NOAA 2006). See detailed description above..



The Southern California steelhead is highly sensitive to human development of coastal and riparian corridors throughout Southern California.

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